

6-port Universal Data Interface Card (6UDTEA-02) for HX9800

Features

- Supports X.21/RS449/RS422/RS232/V.35/V.36/EIA530
- Supports both synchronous and asynchronous data
- Port 1 to 4: two DB44 connectors
- Port 5 to 6: two RJ48 connectors
- Five software configurable modes
- MODE 1: V.110
 - Supports MUX/NON-MUX Mode for SYNC/ASYNC data
 - Port 1 to 4: RS232/RS422/X.21, SYNC/ASYNC 64kbps and sub-rate with V.110 encoding
 - Port 5 to 6: RS232 for 64kbps and sub-rate, ASYNC only
- MODE 2: N x 64K
 - Port 1 to 4: X.21/RS449/RS422/RS232/V.35/V.36/EIA530 SYNC N*64k (N=1~32)
 - Port 5 to 6: Disabled
- MODE 3: N x 64K + Oversampling
 - Port 1 to 3: X.21/RS449/RS422/RS232/V.35/V.36/EIA530 SYNC N*64k, (N=1~32).
 - Port 4: X.21/RS449/RS422/RS232/V.35/V.36/EIA530 SYNC, N*64k, (N=1~20).
 - Port 5 to 6: RS232 N*64k (N=1~6) oversampling for ASYNC data.
- MODE 4: Clock Pass Through
 - Port 1 to 4: RS232/RS422/X.21/V.35/V.36/EIA530 SYNC 38.4K and subrate
 - Port 5 to 6: Disabled
- MODE 5: N x 64K + Local and Remote Loopback
 - Port 1 to 4: X.21/RS449/RS422/RS232/V.35/V.36/EIA530 SYNC N*64k (N=1~32)
 - Port 5 to 6: Disabled
 - Local and Remote Loopbacks with BERT, supporting V.54



Description

The 6-port Universal Data Interface Card (6UDTEA) card for HX9800 is designed to transport DS0 and sub-rate signals. Both SYNC and ASYNC data of X.21, RS449, RS422, RS232, V.35, V.36, EIA530 can be transported on the four ports (i.e. port 1 to 4) of DB44 connector. ASYNC RS232 can be transported on the additional ports (i.e. port 5 and 6) of RJ48 connector. Per-port software configuration is available.

Five modes are designed to provide different requirements of DTE signal transportation.

- In Mode 1, all 6 ports can be MUXed (V.110) into one 64K channel. When the card is set to NON-MUX in Mode 1, asynchronous data rate per channel/port can be up to 38.4 Kbps, and synchronous data rate per channel/port can be up to 64 Kbps.
- In Mode 2, 3 and 5, each of the four ports is able to transport N x 64K synchronous signals. Mode 3 supports additional RS232 asynchronous data, and Mode 5 supports Local and Remote Loopbacks with BERT
- In Mode 4, Clock Pass Through is available for port 1 to 4.

With 6UDTEA card and high bandwidth SDH/SONET/PTN uplink capacity of HX9800, DTE signals can then be hauled throughout networks to remote sites with minimal delay.

Ordering Information

Note 1: RoHS compliant units are identified by the letter **G** appearing at the end of ordering code.

Note 2: Before purchasing, please check the HX9800 main brochure to see if the following models are supported by the controller to be used with.

Model	Description	Notes
HX9800-6UDTEA-02- G	Universal data interface card with software configurable modes for - Up to 6-port sub 64K RS232 with V.110, or - Up to 4-port Nx64K X.21/RS232/RS422/V.35/V.36/EIA530/RS449 Port 1 to 4: two DB44 connectors Port 5 to 6: two RJ48 connectors	Conversion cables are NOT included. Please order conversion cable separately for different DTE interfaces from below. - CXR-ACC-CAB-DB44M-100-2DB25F-VB-G - CXR-ACC-CAB-DB44M-100-2DB15F-VB-G - CXR-ACC-CAB-DB44M-100-2M34F-VB-G - CXR-ACC-CAB-DB44M-100-2DB37F-VB-G

Accessories

Conversion Cables (All conversion cables are RoHS compliant)

CXR-ACC-CAB-DB44M-100-2DB25F-VB	DSUB-44 pin/Male to two DSUB-25 pin/Female plug, Length:100cm	Used in V.35, V.36 and RS232 interfaces.
CXR-ACC-CAB-DB44M-100-2DB15F-VB	DSUB-44 pin/Male to two DSUB-15 pin/Female plug, Length:100cm	Used in X.21 interface.
CXR-ACC-CAB-DB44M-100-2M34F-VB	DSUB-44 pin/Male to two M34 pin/Female plug, Length:100cm	Used in V.35 interface.
CXR-ACC-CAB-DB44M-100-2DB37F-VB	DSUB-44 pin/Male to two DSUB-37 pin/Female plug, Length:100cm	Used in EIA530/RS449 and RS422 interfaces.

6UDTEA-02 Interface Card for HX9800 Series Product Specifications

Mode 1: V.110

Modes

MUX ports (configured per port)

Multiplexing up to 6 ports of 64K or sub-rate to Port 1
Only enabled when Port 1 in MUX mode
One MUX group per card
MUX group bandwidth up to 64Kbps

Non-MUX port (configured per port)

Up to 6 ports for 6 individual 64K or sub-rate channels

DTE Interface (X.21/RS422/RS232)

Data Port	Up to 4 (Port 1 to Port 4)		
MUX	Maximum 4 subrate port / 64Kbps		
Data Rate	Asynchronous	Mux mode	0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K
		Independent mode	0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K, 38.4K
	Synchronous	Mux mode	0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K,
		Independent mode	0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K, 38.4K, 48K, 64K
Connector	DB44 (Port 1 and Port 2), DB44 (Port 3 and Port 4)		
Alarm	Remote Alarm RTS Loss		
Loopback	To-DTE, To-DS1 (To Line)		
Electrical	DCE		
Protocol	V.110		

DTE Interface (RS232)

Data Port	Up to 2 (Port 5 and Port 6)		
MUX	Maximum 6 subrate port / 64Kbps		
Data Rate	Asynchronous	Mux mode	0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K
		Independent mode	0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K, 38.4K
Connector	RJ48 (port5, port6)		
Alarm	Remote Alarm RTS Loss		
Loopback	To-DTE, To-DS1 (To Line)		
Electrical	DCE		
Protocol	V.110		

Mode 2: N x 64K

DTE Interface (X.21/RS449/RS422/RS232/V.35/V.36/EIA530)

Data Port	Up to 4 (Port 1 to 4)
Data Rate	Synchronous N*64kbps, N = 1 to 32 (up to 2.048 Mbps). On the RS232 interface, N is limited to 1 to 2 (up to 128 kbps) Asynchronous mode is not supported.
Connector	DB44
Alarm	RTS Loss
Loopback	To-DTE, To-DS1 (To Line)
Electrical	DCE

Note: Port 5~6 are disabled in Mode 2 when Oversampling is enabled.

Mode 3: N x 64K + Oversampling

DTE Interface (X.21/RS449/RS422/RS232/V.35/V.36/EIA530)

Data Port	Up to 4 (Port 1 to 4)
Data Rate	Synchronous N*64kbps, N = 1 to 32 (up to 2.048 Mbps) for ports 1 to 3, N = 1 to 20 (up to 1.28Mbps) for port 4. On the RS232 interface, N is limited to 1 to 2 (up to 128 kbps) Asynchronous mode is not supported.
Connector	DB44 (Ports 1, 2), DB44 (Ports 3, 4)
Alarm	RTS Loss
Loopback	To-DTE, To-DS1 (To Line)
Electrical	DCE

DTE Interface (RS232)

Data Port	Up to 2 (Port 5 to 6)
MUX	Max 2 oversampling port / 64kbps
Data Rate	No Synchronous mode supported Asynchronous 200, 300, 0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K, 38.4K, 57.6K, 115.2K, 128K
Connector	RJ48 (Port 5 & 6)
Alarm	Remote Alarm RTS Loss
Loopback	To-DTE, To-DS1 (To Line)
Electrical	DCE

Mode 4: Clock Pass Through**DTE Interface (X.21/RS449/RS422/RS232/V.35/V.36/EIA530)**

Data Port	Up to 4 (Port 1 to 4)
Data Rate	Synchronous 0.6K, 1.2K, 2.4K, 4.8K, 9.6K, 19.2K, 38.4K Tx and Rx byte count
Connector	DB44
Alarm	LOLC, LOCH, CRE
Loopback	To-DTE, To-DS1 (To Line)
Electrical	DCE

Note: Port 5~6 are disabled in Mode 4.

Mode 5: N x 64K with Local and Remote Loopback**DTE Interface (X.21/RS449/RS422/RS232/V.35/V.36/EIA530)**

Data Port	Up to 4 (Port 1 to 4)
Data Rate	Synchronous N*64kbps, N = 1 to 32 (up to 2.048 Mbps). On the RS232 interface, N is limited to 1 to 2 (up to 128 kbps)
Connector	DB44
Protection	DTE signal duplicated via Y-box and transported by working and protection cards
Alarm	RTS Loss, FPGA fail
Diagnostics	DTE Loopback: To-DTE, To-DS1 (To Line) Local and Remote Loopback V.54 standard BERT
Electrical	DCE

Note: Port 5~6 are disabled in Mode 5.

Application Illustrations

